

REPORTING AND DISPOSITION OF NONCONFORMING AEROSPACE HARDWARE ITEMS AND PRODUCTS

LMS-CP-5507
Revision: C-3

Technical Team

START

Document discrepancy and analyze to determine cause and if nonconforming item and product exists (see Note 1)

Nonconforming item or product?

No

Yes

Mark the item or product as nonconforming. Notify supplier and segregate the nonconforming item or product. (see Note 2 & 3)

Further analyze the discrepancy and document recommendation for disposition (see Notes 1 & 4)

Technical Lead or Cognizant Engineer

Review recommendation for acceptability of proposed disposition (see Note 5)

Disposition acceptable?

No

Yes

Follow project/activity product assurance requirements and/or LF 143 to obtain any required approvals

Investigate potential need for waiver (see Note 6)

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Objectives:

- to document, investigate, and resolve discrepancies found during inspection or test
- to identify nonconforming items or product enabling remedial action
- to obtain appropriate approval for disposition of nonconforming items or product
- to ensure disposition of nonconforming items or product
- to enter causes of discrepancies and nonconforming items or product into the corrective action system when the cause(s) is determined to be systemic

Approval _____
Associate Director for Research and Technology Competencies

General Information

The following records are generated by this procedure and should be maintained in accordance with CID 1440.7:

Configuration Management Plan
Nonconformance Failure Report (LF 143)
Nonconformance Report (LF 149)
Nonconformance Report Number Assignment Log

Note 1

Methods of documentation are controlled by product assurance requirements of the project/activity and include:

- LF 143 (NFR)
- LF 149 (NCR)
- Hardware Log Book
- Engineering Log Book

For all space items, LF 143 must be used.

For nonconforming item or product LF 143 or LF 149 must be used.

After observation and documentation of a **discrepancy**, an analysis is performed to determine if it is due to **nonconformance** of item or product being inspected or tested or some "other cause," e.g., operator or procedural error or misinterpretation. If a **nonconforming item** is suspected, further analysis is performed to determine if a **nonconforming product** exists. In all cases, including "other causes," analysis includes the consideration of part or product damage or stress from propagated failure or abnormal conditions.

Definition of Terms:

A "**discrepancy**" is any observed variance, lack of agreement, or contradiction to the required or expected outcome, configuration, or result.

A "**nonconformance**" is a nonfunctional workmanship condition of any item (hardware or software) in which one or more characteristics do not conform to drawing specification or procedure requirements.

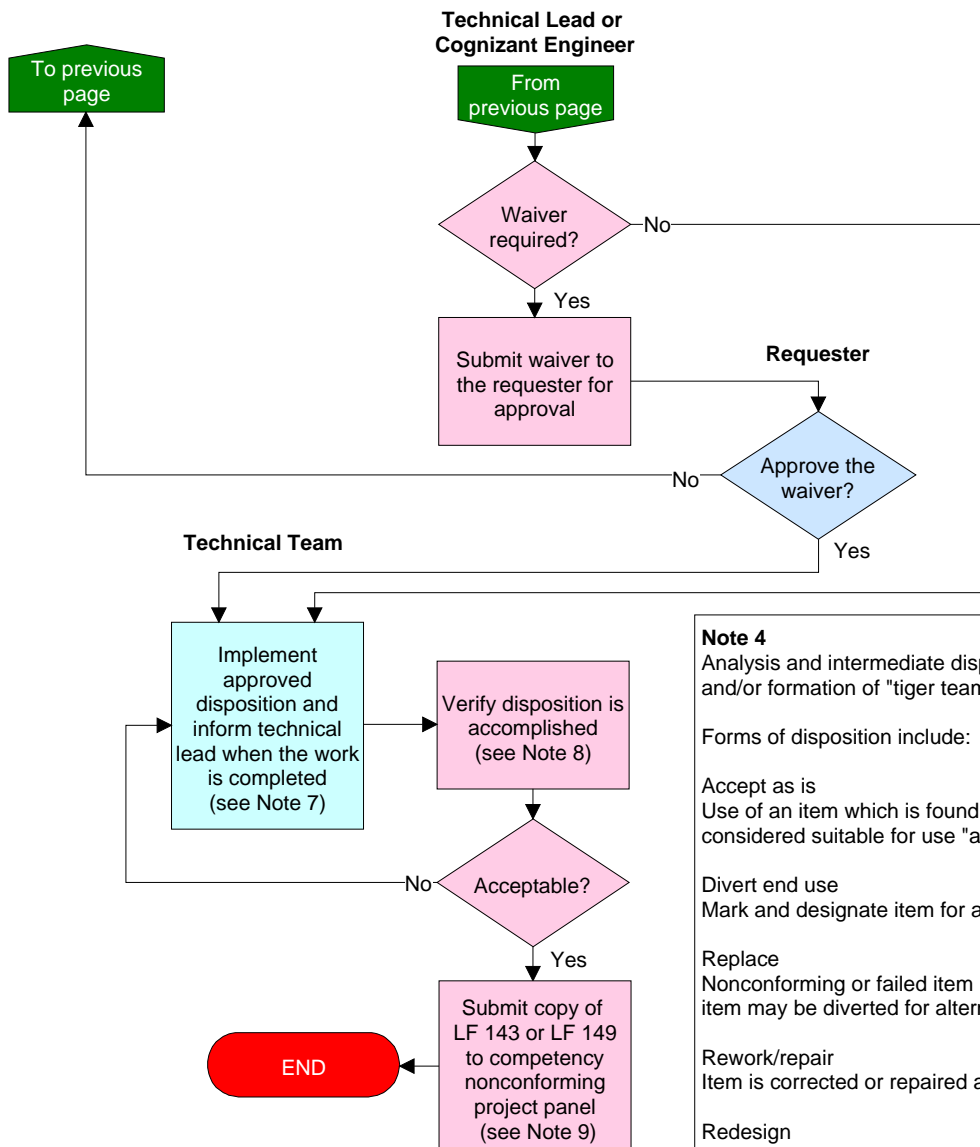
A "**nonconforming item**" is software, hardware, or assemblage thereof, either produced at Langley, acquired, or in some combination, that is identified as not meeting documented requirements following verification or testing, i.e., that is found to have a nonconformance.

A "**nonconforming (Langley) product**" is defined (see Langley Management System Policy Manual, LMS-PM) as software developed or hardware fabricated at Langley by civil servants that is identified as not meeting documented requirements following verification or testing; acquired or assembled "items" are not considered "products."

Note 2

In some cases, it may not be feasible or practical to mark the actual item or project. In this case, appropriate related records or documentation is marked. The methods for marking items and/or products are controlled by product assurance requirements of the project/activity and include:

- LF 133, LF 136
- LF 143 (NFR)
- LF 149 (NCR)
- Logbook
- Inking/Coloring
- Tagging



Note 3

If the item or product is stand alone and can be moved without the use of lifting equipment, disassembly, or test setup disruption, it must be segregated to avoid inadvertent use or further processing.

Note 4

Analysis and intermediate disposition may include further test or investigation and/or formation of "tiger teams" using LMS-CP-5508.

Forms of disposition include:

Accept as is

Use of an item which is found to depart from specified requirements, but is considered suitable for use "as is". May require Waiver, see Note 6.

Divert end use

Mark and designate item for alternate use. May require Waiver, see Note 6.

Replace

Nonconforming or failed item is removed and a new item is installed. Original item may be diverted for alternate use or analyzed and/or scrapped.

Rework/repair

Item is corrected or repaired and reinstalled. May require Waiver, see Note 6.

Redesign

Redesign requires technical team to revisit design and make modification to item or product.

Reject/Scrap

Destroy or remove from all use.

Note 5

In addition to reviewing recommended disposition of discrepancy, review documentation to confirm:

- Sufficient detail provided
- Impact on performance, cost and schedule
- Feasibility/practicality of proposed disposition
- Agreement with technical conclusion
- Required approvals

When using LF 143 (NFR), the project/activity material review board must approve disposition.

Note 6

Where required by Work Agreement or product assurance requirements, the proposed use or repair of item or product which does not conform to specified requirements is reported for Waiver to the requester or requester's representative. Obtain concurrence of appropriate responsible project and/or competency management prior to presenting Waiver to requester.

Note 7

Implement a change to baselined configuration or documents using LMS-CP-5510 and the configuration management requirements of the activity.

Reinspection and retesting is required on all disposition items/products except those that are used "as is."

Observation of discrepancy during disposition leads to re-entry into this procedure.

Note 8

The following forms of verification are acceptable:

- Reinspection
- Review of test results
- Review of design documentation or Log Books
- Interviews with interested parties

When using LF 143 (NFR), the project/activity quality assurance specialist must approve and close-out NFR.

Note 9

A copy of the LF 143 or LF 149 is submitted to the Competency Nonconforming Product Panel for trending and consideration for implementation of corrective and/or preventative action, including generation of a CAPTracs entry, following LMS-CP-5645.